58. (New) The capacitor of claim 54, wherein the at least a portion of the metal capacitor plate is oxidized in a supersaturated Sr^{+2} solution.

59. (New) A capacitor formed by a process comprising:

forming a metal layer on a starting substrate;

contacting the metal layer with an electrolytic solution;

applying a potential across the electrolytic solution and the metal layer; and

oxidizing at least a portion of the metal layer to form at least a portion of a dielectric layer.

60. (New) The capacitor of claim 59, wherein the starting substrate is formed from silicon dioxide.

61. (New) The capacitor of claim 59, wherein the metal layer is formed from at least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel.

62. (New) The capacitor of claim 61, wherein the at least one metal is alloyed with at least one additional metal selected from the group consisting of strontium, barium, and lead.

63. (New) The capacitor of claim 59, wherein the electrolytic solution is a basic solution.

64. (New) The capacitor of claim 59, wherein the electrolytic solution is an acidic solution.

65. (New) The capacitor of claim 59, wherein the electrolytic solution is a solution of one part NH_4OH to ten parts water.

66. (New) The capacitor of claim 59, wherein the electrolytic solution is a 0.1 molar solution of $HClO_4$.

67. (New) The capacitor of claim 59, wherein the at least a portion of the metal layer is oxidized in a supersaturated Sr^{+2} solution.

68. (New) A capacitor formed by a process comprising:

forming a metal layer overlying a starting substrate formed from silicon dioxide, the metal layer being formed from at least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel, alloyed with at least one additional metal selected from the group consisting of strontium, barium, and lead;

contacting the metal layer with an electrolytic solution;

applying a potential across the electrolytic solution and the metal layer; and

oxidizing at least a portion of the metal layer to form an oxidized layer forming at least a portion of the dielectric layer.

69. (New) The capacitor of claim 68, wherein the electrolytic solution is a basic solution.

70. (New) The capacitor of claim 68, wherein the electrolytic solution is an acidic solution.

71. (New) The capacitor of claim 68, wherein the electrolytic solution is a solution of one part NH_4OH to ten parts water.

72. (New) The capacitor of claim 68, wherein the electrolytic solution is a 0.1 molar solution of $HClO_4$.

73. (New) The capacitor of claim 68, wherein the at least a portion of the metal layer is oxidized in a supersaturated Sr^{+2} solution.

74. (New) A capacitor formed by a process comprising:

forming a metal capacitor plate on a substrate assembly, the metal capacitor plate being formed from at least one metal selected from the group consisting of titanium, copper, gold,